

Instructions

Each lab class will be divided into workgroups of three (3) to four (4) students. Each group is to become a team to perform a system analysis for the problem outlined. The format of the solution will be explained during subsequent tutorials. In some weeks there will be time allocated in the computer labs for students to meet with their group members to work on the project.

The objective of this assignment is to consolidate learning and understanding of the materials presented within laboratories and lectures into a set of formal documents containing requirements specifications and models.

Overview of the task

You have come up with a detailed systems analysis for a 'Pothole Management System'. Consider that, your group is a team that is competing for a contract with the NSW Government.

The final outcome of your project is to write an effective systems analysis showing how the system would function and how the client can benefit from your proposed solution.

Overview

You will leverage the tools and techniques that you have learnt as a systems analyst to produce an analysis report. While it is important to infer correct understanding and elicitation of requirements and produce the appropriate documentation and modelling, the most important aspect of this assignment is your ability to communicate your ideas effectively and to work together as team.

Team members are free to decide what role they wish to choose out of the following roles:

- The project/documentation manager
- The project planner
- Analyst(s) (Business/Systems)

After forming your teams, we recommend you set a regular meeting time. There are some very useful tools, such as Google Docs, that allow for collaborative editing of documentation. It is strongly recommend that a CASE tool (e.g., UMLet or Libreoffice) is used for your requirements specifications and diagrams.

Project - Pothole management system

You are to develop the system for the user by several groups (stakeholders) to report, track, and aid in the fixing of potholes. You are to model the whole system, the back end system is for councils and roads and maritime services (RMS). It should include analytics of occurrences, location hotspots, and assist in workloads management. It should also include front end systems for the public to interface with and for the contractors to complete and retrieve information and work processes.

Part A – User evaluation report

- Weighting: 10%
- Due: Week 6 (A softcopy needs to be submitted on Friday @7:00pm of that week).

The user evaluation report must identify the user groups that are stakeholders of the system, with a Stakeholder Analysis' and Interview Questions. In this report an initial System Vision Documents, WBS, and Gantt Chart of the systems analysis process must be created.

Part B – Progress check interview

- Weighting: 5%
- Due: Conducted in your enrolled lab (Week 8)

The aim of the progress interview is to ensure that groups are on-track with relation to their project. Questions will be asked of students on their work to date. It is expected that groups are able to show their progress after completing Part A (e.g., building use cases). The interview should confirm that the progress is being made within the tolerances and provide early warnings of possible problems that may need actions.

Part C – System description and modelling

- Weighting: 20%
- Due: Week 12 (A softcopy needs to be submitted on Friday @7:00pm of that week).

This report should include:

Project Plan

- Chosen software development methodology
- Justification of chosen methodology
- System scope statement
- Feasibility study
- Gantt Chart
- WBS
- System Vision Documents

Requirements Analysis (with explanations in English)

- Use Case Descriptions
- Use Case Diagrams
- Activity Diagrams
- Domain Model Class Diagrams

Teamwork information

Teams that are poorly managed will suffer as a result. It is a requirement that all team members must contribute to the project. It is team members' responsibility to oversee each other and get each other involved.

Individual team members who do not make a valid or proper contribution will be penalised. In this situation, team members can make an appeal to the Subject Coordinator before the submission of Part C. The Subject Coordinator has the right to open a group discussion to weight the mark of each member according to her/his actual contribution.

Submission information

For Part A and Part C, each group can only submit **one copy** of submission to the correct dropbox. This submission should clearly specify the student numbers and names of all group members.